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Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

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Federal Communications Commission  
Office of Secretary

In the Matter of

Revision of the Commission's  
Rules to Ensure Compatibility  
With Enhanced 911 Emergency  
Calling Systems

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CC Docket No. 94-102

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REPLY COMMENTS OF  
THE PERSONAL COMMUNICATIONS INDUSTRY ASSOCIATION

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**REPLY COMMENTS OF  
THE PERSONAL COMMUNICATIONS INDUSTRY ASSOCIATION**

The Personal Communications Industry Association ("PCIA"), by its attorneys, hereby submits its reply comments on the *Further Notice of Proposed Rulemaking* in the above-captioned docket.<sup>1</sup> As discussed herein, many commenters support PCIA's position that the Commission should not attempt to expand the requirements for enhanced 911 ("E911") services beyond the technological limits of the wireless industry and the demonstrated needs and resources of the public safety community.

**I. INTRODUCTION AND SUMMARY**

In the *Further Notice*, the Commission sought comment on a number of proposals to expand the requirements for E911 services established by the *Report and Order* in this proceeding.<sup>2</sup> In particular, the FCC sought comment on the following issues. First, the Commission proposed that "covered carriers" should provide automatic location information ("ALI") to Public Safety Answering Points ("PSAPs") that locates a caller within a 40 foot

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<sup>1</sup> Revision of the Commission's Rules to Ensure Compatibility With Enhanced 911 Emergency Calling Systems, FCC 96-264 (released Jul. 26, 1996) ("*Further Notice*").

<sup>2</sup> *Further Notice*, ¶ 134.

radius, using latitude, longitude, and vertical location data, for 90 percent of the 911 calls processed.<sup>3</sup> Second, the Commission asked whether it is feasible to permit mobile users to complete a 911 call across multiple mobile systems, including those using different air interfaces.<sup>4</sup> Third, comment was sought on whether a minimum latency period should be established for providing location information to a PSAP, and whether the caller's location should be updated during a 911 call.<sup>5</sup> Fourth, the Commission queried whether a carrier should be required to transmit all 911 calls to PSAPs, without a formal request, including calls from non-service initialized handsets.<sup>6</sup> Lastly, the FCC requested comment on how consumers could be informed about the scope and limits of 911 services available to wireless subscribers.<sup>7</sup>

In its opening round comments, PCIA suggested that the Commission's proposals be modified as follows:

- Given the technological limits and practical constraints inherent in obtaining more accurate location information, the Commission should not require wireless ALI that is accurate to a 40 foot sphere in 90 percent of all cases. Instead, the FCC should independently determine whether more accurate location information is warranted if PSAPs, after analyzing the results from the *Report and Order's* ALI requirements, have requested such information.

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<sup>3</sup> *Id.*, ¶ 138.

<sup>4</sup> *Id.*, ¶¶ 144-148.

<sup>5</sup> *Id.*, ¶ 142.

<sup>6</sup> *Id.*, ¶ 149.

<sup>7</sup> *Id.*, ¶¶ 150-153.

- Until significant advances in the development of multimode handsets are achieved, it is not feasible to require carriers to provide 911 services to subscribers using incompatible air interface technologies. Furthermore, mandating cross-system compatibility is fundamentally inconsistent with the Commission's decision not to establish a common air interface for broadband PCS or standards for digital cellular systems.
- Although it is unclear whether updating location information during a 911 call is either feasible or useful, the Commission should defer to PSAPs to determine whether and when this information should be updated.
- Because of the PSAP-by-PSAP differences in the quality of E911 service, PSAPs, rather than carriers, should be primarily responsible for educating consumers about the limitations of 911 services available to wireless subscribers.

The record generally reflected a high degree of support for PCIA's positions. First, the vast majority of parties agreed that the Commission should not expand ALI requirements because a more stringent standard is neither technically nor economically feasible at this time. Second, many commenters also supported PCIA's position that a carrier should not be required to handle 911 calls from subscribers using an incompatible air interface, nor should the Commission impose a requirement that a carrier automatically update a caller's location during a 911 call. In addition, as PCIA emphasized in its Petition for Reconsideration,<sup>8</sup> a number of commenters urged the Commission not to require carriers to forward 911 calls from a wireless handset that does not transmit code identification information. Finally, PCIA agreed with those commenters who supported implementing customer education programs through PSAPs, rather than through carrier administered programs or equipment labelling.

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<sup>8</sup> Personal Communications Industry Association, Petition for Reconsideration, CC Docket No. 94-102, at 7-9 (filed Sept. 3, 1996) ("PCIA Reconsideration Petition").

**II. THE COMMISSION SHOULD NOT IMPOSE A WIRELESS ALI REQUIREMENT THAT IS ACCURATE TO A 40 FOOT SPHERE IN 90 PERCENT OF ALL CASES UNTIL DATA FROM THE 125 METER REQUIREMENT HAS BEEN ANALYZED**

In its opening comments, PCIA opposed the Commission's proposal to require wireless ALI accurate to a 40 foot sphere in 90 percent of the cases. PCIA explained that this proposal should not be implemented because it appears that the technology cannot support such a standard, it is unclear whether the proposal would be economically feasible, and this requirement would put wireless carriers at a competitive disadvantage relative to wireline carriers. The record generally supports PCIA's position, and commenters uniformly agree that the Commission should defer any decision until the results from the *Report and Order's* ALI requirement can be evaluated. Therefore, the Commission should not mandate a more stringent ALI standard until PSAPs request more accurate location information *and* the Commission has independently determined that the benefits of providing such information outweigh its costs.

An overwhelming majority of commenters echoed PCIA's concern that a 40-foot ALI standard might not be technically feasible at the present time.<sup>9</sup> For example, Ericsson Inc. ("Ericsson") and Lucent Technologies, Inc. ("Lucent") suggested that global positioning

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<sup>9</sup> See, e.g., Comments of Associated RT, Inc., a subsidiary of the Associated Group, Inc., CC Docket No. 94-102, at 24-26 (filed Sept. 25, 1996) ("Associated RT Comments"); Comments of AT&T Wireless Services, Inc., CC Docket No. 94-102, at 2-3 (filed Sept. 25, 1996) ("AT&T Wireless Comments"); Comments of KSI Inc. and Mulloc Inc., CC Docket No. 94-102, at 5-7 (filed Sept. 25, 1996) ("KSI Comments"); Comments of Lucent Technologies, Inc., CC Docket No. 94-102, at 3-5 (filed Sept. 25, 1996) ("Lucent Comments"); Comments of the Mobile Personal Communications Division of the Telecommunications Industry Association, CC Docket No. 94-102, at 6-9 (filed Sept. 25, 1996) ("TIA Comments").

systems ("GPS") might not meet the proposed standard because this technology currently cannot locate mobiles operating inside a building or in other obstructed locations.<sup>10</sup> Several parties also explained that existing terrestrial-based solutions -- such as triangulation-based ALI technology -- might not comply with a stringent ALI standard and could introduce additional problems.<sup>11</sup> For example, terrestrial-based solutions would require carriers to locate and construct the additional antennas necessary to provide location information and might not work with all air interfaces, including PCS and SMR air interface standards.<sup>12</sup>

Finally, several commenters noted that mandating a more stringent ALI standard might also retard development of the current standard and delay introduction of ALI.<sup>13</sup> Specifically, when faced with the prospect of implementing two standards that might not be

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<sup>10</sup> Comments of Ericsson Inc., CC Docket No. 94-102, at 3 (filed Sept. 25, 1996) ("Ericsson Comments"); Lucent Comments at 4-5; *see also*, KSI Comments at 6. Furthermore, contrary to the characterization of KSI, PCIA does not assume that a mobile unit based approach (such as GPS) is the location technology "of choice" to deliver an enhanced ALI standard. *See* KSI Comments at 6. Instead, PCIA remains open to consider the merits of any proposed technical solutions to implement the Commission's existing or proposed ALI standards.

<sup>11</sup> *See* Comments of AirTouch Communications, Inc., CC Docket No. 94-102, at 3-4 (filed Sept. 25, 1996) ("AirTouch Comments"); Ericsson Comments at 2-4; Lucent Comments at 5; Comments of Omnipoint Communications, Inc., CC Docket No. 94-102, at 2-4 (filed Sept. 25, 1996) ("Omnipoint Comments"). Moreover, for cable based PCS systems that utilize distributed antennas that could be miles away from their associated base station, triangulation will never work.

<sup>12</sup> *See* Associated RT Comments at 6-7, 24-26; Comments of Harris Government Communications Systems Division, a Division of Harris Corporation, CC Docket No. 94-102, at 4 (filed Sept. 25, 1996) ("Harris Comments"); TIA Comments at 8.

<sup>13</sup> *See* Associated RT Comments at 4-7; Comments of Bell Atlantic NYNEX Mobile, Inc., CC Docket No. 94-102, at 3 (filed Sept. 25, 1996) ("Bell Atlantic Comments"); KSI Comments at 6.

compatible, equipment manufacturers might delay deployment of the more readily achievable ALI system by devoting their resources to pursuing the long-term objective.<sup>14</sup>

Commenters also expressed concern that a more stringent ALI standard would impose unduly burdensome costs on carriers and the public safety community. Although the costs associated with an enhanced ALI standard cannot be determined precisely, several equipment manufacturers explained that system costs will be prohibitively high in many operating environments.<sup>15</sup> In addition, given that some states have already begun to express concern regarding implementation of the *Report and Order's* E911 requirements, it is doubtful that localities will have the ability or political will to implement an enhanced location standard.<sup>16</sup> Finally, as PCIA noted in its original comments, and as echoed by AT&T Wireless, wireless carriers might well be placed at a competitive disadvantage compared to wireline carriers as localities seek to impose additional funding mechanisms to recover these increased costs.<sup>17</sup>

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<sup>14</sup> See Associated RT Comments at 4-5.

<sup>15</sup> See, e.g., KSI Comments at 5; Associated RT Comments at 29-30 (estimating that costs associated with implementing an enhanced location technology would be between 4 and 10 times the cost to implement the Commission's existing ALI standard).

<sup>16</sup> See Comments of New Jersey Office of Emergency Telecommunications Service, CC Docket No. 94-102. at 3-4 (filed Sept. 24, 1996).

<sup>17</sup> See AT&T Wireless Comments at 3.



### **III. WIRELESS CARRIERS SHOULD NOT BE REQUIRED TO PROVIDE 911 SERVICES ACROSS SYSTEMS WITH INCOMPATIBLE AIR INTERFACES**

Many commenters agreed that wireless carriers should not be required to provide 911 services across multiple mobile services, including those with different air interfaces.<sup>18</sup> For example, Omnipoint Communications, Inc. noted that the Commission has correctly acknowledged that incompatibilities exist among wireless systems, and that the FCC continues to rely on carriers to develop compatibility between different air interfaces only where technically and economically feasible.<sup>19</sup> Indeed, commenters explained that any attempt to impose a common standard would be unrealistic at this time given the significant investment in infrastructure that would be required, the different frequency bands used by wireless providers, and the present state of multimode handset technology.<sup>20</sup>

Several equipment providers, carriers, and public safety organizations also agreed that present multimode handset technology will not permit subscribers to access 911 services

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<sup>18</sup> See, e.g., Comments of Ameritech Corporation, CC Docket No. 94-102, at 7 (filed Sept. 25, 1996) ("Ameritech Comments"); AT&T Wireless Comments at 5-6; Omnipoint Comments at 4-6.

<sup>19</sup> Omnipoint Comments at 4-9.

<sup>20</sup> See, e.g., AT&T Wireless Comments at 5-6; Ameritech Comments at 7-9; Comments of GTE Service Corp., CC Docket No. 94-102, at 7 (filed Sept. 25, 1996) ("GTE Comments"); Omnipoint Comments at 6-7. For example, Ameritech Corp. explained that any solution that provided cross-system compatibility for E911 service would be difficult to incorporate into the variety of wireless frequencies and protocols currently in use. Ameritech Comments at 8.

across multiple mobile systems.<sup>21</sup> Several commenters explained that, while such solutions ultimately may be developed, mandating cross-system compatibility will also require consumers to bear significant equipment costs and could retard the growth of the wireless industry.<sup>22</sup> Accordingly, these commenters generally urged the Commission not to impose a cross-system requirement, and instead allow the marketplace to determine system cross-compatibility.<sup>23</sup>

#### **IV. THE COMMISSION SHOULD NOT REQUIRE CARRIERS TO UPDATE LOCATION INFORMATION UNTIL THE RELATED TECHNICAL AND PRACTICAL CONSIDERATIONS ARE ADDRESSED AND PSAPs REQUEST SUCH UPDATES**

There was also support for PCIA's suggestion that an automatic location update feature may not be useful, economically practical or technically feasible. Ameritech Corp. echoed PCIA's concern that updated location information may be unnecessary because the vast majority of emergency calls are made either by "Good Samaritans" or by stationary callers.<sup>24</sup> In addition, several commenters explained that providing automatic updating

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<sup>21</sup> See, e.g., Joint Comments of the Association of Public-Safety Communications Officials-International, Inc. ("APCO"), National Emergency Number Association ("NENA") and National Association of Nine One One Administrators ("NASNA"), CC Docket No. 94-102, at 6 (filed Sept. 25, 1996) ("APCO Comments"); Ericsson Comments at 5-7; Lucent Comments at 7; Omnipoint Comments at 7-9.

<sup>22</sup> Ericsson Comments at 5-7; Lucent Comments at 7; Comments of Nokia Communications, Inc., CC Docket No. 94-102, at 6 (filed Sept. 25, 1996) ("Nokia Comments").

<sup>23</sup> *Id.*; Omnipoint Comments at 9.

<sup>24</sup> Ameritech Comments at 12-13 (citing the Commission's conclusion in the *Report and Order* that approximately 97% of wireless 911 calls are made by "Good Samaritans").

features through "triangulation-based" ALI would result in a significant loss of system capacity and would require substantial infrastructure modifications.<sup>25</sup> Therefore, because automatic location updates may be neither technically feasible nor economically practical, the Commission should defer mandating such a requirement.<sup>26</sup>

However, if the Commission does determine that it is economically feasible, technically practical, and useful to impose a location update feature, several commenters agree with PCIA's proposal that location updates should only be required upon PSAP request. For example, APCO and other commenters proposed requiring carriers to update a caller's location on a case-by-case basis upon PSAP request, rather than requiring carriers to update the location of all calls.<sup>27</sup> Regardless of the type of update system selected, PCIA agrees with those commenters that maintain that the decision to implement a location update feature should be driven by PSAP requirements and available technology.<sup>28</sup>

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<sup>25</sup> See, e.g., Ameritech Comments at 12-13. Furthermore, PCIA maintains that the Commission should distinguish between technically "possible" and technically "feasible" in assessing claims that automatic update features are currently available. See, e.g., KSI Comments at 2-3. Indeed, PCIA submits that the record supports its assertion that substantial uncertainty exists regarding whether these features are necessary to begin with and whether they can be practically implemented.

<sup>26</sup> See, e.g., AT&T Wireless Comments at 4; GTE Comments at 5 (explaining that "no latency period or location information update requirements should be adopted until location technology is thoroughly tested and validated under live testing simulations").

<sup>27</sup> See, e.g., APCO Comments at 4-5; AT&T Wireless Comments at 4 (proposing that if technology permits, a periodic location update feature could instead be provided at PSAP request on a call-by-call basis); Lucent Comments at 6.

<sup>28</sup> See, e.g., Associated RT Comments at 17-18; GTE Comments at 5.

**V. THE COMMISSION SHOULD NOT EXPAND A CARRIER'S OBLIGATION TO FORWARD 911 CALLS MADE FROM NON-SERVICE INITIALIZED HANDSETS**

In the *Further Notice* the Commission proposed that covered carriers should be obligated to transmit all calls to PSAPs, without a request, including those calls that did not transmit code identification information. Because most, if not all, calls without code identification information will originate from non-service initialized handsets, the Commission's proposal will require carriers to forward all 911 calls made from non-service initialized handsets. As PCIA explained in its Petition for Reconsideration, carriers cannot provide call back information for non-service initialized mobiles because these handsets will generally not contain a recognizable call back number.<sup>29</sup>

Many commenters agreed with PCIA's concerns and explained that the Commission's proposal will increase the likelihood of fraudulent calls.<sup>30</sup> For example, Southwestern Bell Mobile Systems, Inc. pointed out that it will not be possible to provide a PSAP with a call back number from a handset that does not transmit code identification information.<sup>31</sup> Additionally, permitting 911 calls from such handsets could result in a greater number of fraudulent calls because a carrier will not be able to determine the caller's identity.<sup>32</sup>

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<sup>29</sup> See PCIA Reconsideration Petition at 7-9.

<sup>30</sup> See, e.g., AirTouch Comments at 6; APCO Comments at 7; Comments of the Cellular Telecommunications Industry Association, CC Docket No. 94-102, at 7-8 (filed Sept. 25, 1996) ("CTIA Comments").

<sup>31</sup> Comments of Southwestern Bell Mobile Systems, Inc., CC Docket No. 94-102, at 3-4 (filed Sept. 25, 1996) ("SBMS Comments").

<sup>32</sup> *Id.* at 3-5.

Moreover, the public safety community recognized the problems inherent in receiving anonymous calls and urged the Commission to allow PSAPs to determine whether they wish to receive them.<sup>33</sup>

Further, the substitute numbering plan submitted by the Ad Hoc Alliance for Public Access to 911 ("Ad Hoc Alliance") will not alleviate the threat of fraudulent calls and may result in a wasteful allocation of scarce numbering resources. The Ad Hoc Alliance proposal requires a carrier to select and maintain a "pool" of substitute local telephone numbers for temporary assignment to non-service initialized handsets during 911 calls. This proposal will not discourage fraudulent calls, however, because a carrier cannot ascertain the true identity of the caller using the "temporary" number. Furthermore, the Ad Hoc Alliance fails to adequately consider the costs of maintaining the large block of telephone numbers necessary to provide temporary call back numbers.

Therefore, the Commission should reject the Ad Hoc Alliance's proposed plan and decline to adopt a requirement that a carrier must forward all calls to PSAPs without a request. PCIA maintains that it is misguided to adopt any plan or requirement that fails to consider, at a minimum, whether the public safety community wishes to receive information from a handset that does not transmit code identification information.

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<sup>33</sup> APCO Comments at 7.

**VI. CONSUMER EDUCATION PROGRAMS SHOULD BE ADMINISTERED BY PSAPs RATHER THAN CARRIERS, BUT EQUIPMENT LABELLING SHOULD NOT BE ADOPTED**

The overwhelming majority of commenters, like PCIA, agree that consumer education can play an important role in increasing awareness about the limits of wireless 911 service.<sup>34</sup> PCIA believes that education programs will become even more important as wireless providers begin to implement the *Report and Order's* E911 requirements. However, because wireless carriers will implement E911 by local PSAP area on different schedules, any educational program must be tailored to inform consumers of the 911 services available in their local area. Therefore, PCIA agrees with those commenters that believe that PSAPs, not carriers, should be primarily responsible for initiating consumer education programs.<sup>35</sup>

Finally, PCIA opposes the use of equipment labelling to educate consumers about the limits of E911 service.<sup>36</sup> PCIA maintains that an equipment labelling requirement would be ineffective given the differences in E911 services that are likely to exist between PSAP service areas. Further, equipment labels might also serve to confuse customers because these labels will become obsolete as PSAP and network capabilities change.<sup>37</sup>

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<sup>34</sup> See, e.g., AirTouch Comments at 7; SBMS Comments at 7-8.

<sup>35</sup> See, e.g., Bell Atlantic Comments at 7; CTIA Comments at 10.

<sup>36</sup> Cf. APCO Comments at 7; Further Comments of the Texas Advisory Commission on State Emergency Communications, CC Docket No. 94-102, at 3 (filed Sept. 24, 1996).

<sup>37</sup> Accord AT&T Wireless Comments at 8.

## VII. CONCLUSION

The Commission should not expand the wireless ALI requirements established in the *Report and Order* until technology has advanced and the Commission can consider the results of the 125-meter ALI standard. Furthermore, the Commission should not mandate that a carrier: (1) provide 911 service across multiple wireless systems; (2) automatically update location information during a 911 call; and (3) forward a 911 call to a PSAP, without a PSAP request, from a handset that does not transmit code identification information. Lastly, PSAPs should be primarily responsible for educating consumers about the limits of 911 service offered to wireless subscribers.

Respectfully Submitted,

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